RSPH-98-4309-3

50343

EXEMPTION EVALUATION FORM
(Revised as of July/Mar20,1998)

PART 1 AE'PLICANT

1A. Application Number: 32494

Exemption Number : 12124

Project Officer : P. T. Olson

1B. Date of Application: 7/28/98

1C. Name of Applicant: Jack E. Helms, Transportation Advisor
Company Name: Albemarle Corporation
Address: 451 Florida Street
Baton Rouge, LA 70801-1780
Phone Number: 504-388-8011

1D. Consultant Name: Pat Quinn
Company name: HMTA
Phone Number: 202-463-3511

1E. Summary of What Applicant is Requesting:
This exemption authorizes the transportation of certain pyrophoric solids in a non-DOT specification portable tank comparable to a specification DOT 51 portable tank.

1F. Regulation(s) exempted: 49 CFR 173.242 in that a non-DOT specification portable tank is authorized; §178.245-1(c) in that all openings are not grouped in one location; and §178.245-1(d)(4) in that the tank is not in a full framework for containerization and this exemption allows a bottom discharge opening with no internal stop-valve.

1G. Modes of Transportation:

1 Motor Vehicle (X) 2 Rail Freight ( )
3 Cargo Vessel (X) 4 Cargo Aircraft ( )
5 Passenger Aircraft ( )

PART 2 REVIEW FOR DOCKETING

(X) Application contains sufficient information to support docketing.
( ) Application is incomplete or unnecessary and should be returned for the following reason(s).

PART 3 HAZARDOUS MATERIALS

3A. Hazardous Materials to be shipped:

Hazardous materials authorized	Hazard Class/ Division	Identi-fication Number	Packing Group
Pyrophoric organometallic compound, n.o.s. (Metallocenes)	4.2	UN3203	I
Pyrophoric solid, inorganic, n.o.s. (Metallocenes)	4.2	UN3200	I
Water-reactive solid, n.o.s. (Metallocenes)	4.3	UN2813	I
Organometallic compound, water-reactive, flammable, n.o.s. (Metallocenes)	4.3	UN3207	I

For the N.O.S entries above, the requirements of 49 CFR 172.203(k must be met.

3B. Is the hazardous material capable of being detonated? NO
(If No – go to 3C)

If so, under what conditions?

3c. Other risks presented by the material that warrant special assessment. **Exothermic degradation will occur upon contact with water or oxygen.**

PART 4 PACKAGING

4A. Is the applicant seeking an exemption from the packaging requirements? YES
(If No – Go on to Part 5)

4B.
__ Non authorized specification package.
__ Authorized Specification package with quantity or size variation.
__ Material change.
__ Over authorized pressure.
X Non specification package. Most comparable spec. package. **DOT Specification** 51 **steel portable tank**

4c. What are the possible failure modes of the packaging? **Same as for DOT Specification 51 steel portable tank.**

Is the material of construction appropriate? Yes

Will the packaging integrity be sufficient? Yes

In the case of a pressurized packaging, will the package adequately contain any pressure that might develop? Yes

Does packaging meet the performance requirements for air transportation? NO

Have evaluation of tests results shown the package to be equivalent? Yes

4D. Are special handling measures needed? Yes. **A dry nitrogen blanket of 22 psig must be provided for transportation of pyrophoric solid material.**

PART 5 SPECIAL TRANSPORT AND INFORMATIONAL CONTROLS

5A. Is the applicant seeking an exemption from Special Transport and Informational Controls? No. (If No – go to Part 6)

5B. Indicate control from which variance is sought. (i.e., placarding requirements, etc.)

PART 6 SHIPPING EXPERIENCE

6A. What has the generally shipping experience been with this type of material, package, and operation? **Satisfactory experience with similar packaging on DOT-E 11970.**

6B. Can any rough estimate be made on the extent of the use of this exemption? How many shipments will be made and how much material will be transported?

6C. Is this a new package with no shipping experience? No.

PART 7 SAFETY AND RISK ASSESSMENT

7A. 49 CFR § 107.105(d) prescribes requirements for justification of an exemption through comparisons with established levels of safety and risk assessment. Has the applicant demonstrated equivalent levels of safety or provided an appropriate risk analysis? **The applicant proposes DOT-E 11970 and Competent Authority Approval CA-9606007 as the standard of equivalency for this application. The packaging proposed herein is a steel portable tank, certified and stamped with the ASME U stamp, and meeting the structural requirements of DOT Specification 51.**

7B. What are the hazards (worst case) posed by the proposed exemptions? What could go wrong? Are the risks significant? What is the degree of uncertainty as to likelihood or consequences? **Risks are the same as for transportation in the authorized packaging in DOT Specification 51 steel portable tank.**

7c. What are the benefits to the public and the applicant of granting the exemption? What trade-offs have been made? **The public is benefited by the safe and cost effective transportation of pyrophoric solid material under conditions that are consistent with the risks associated with packaging authorized by the HMR.**

7D. Does this exemption (and other similar exemptions) point to the need for possible regulatory changes? If so what other information is needed to support a regulatory change. No **regulatory change is recommended.**

PART 8 DOCKET COMMENTS/INFORMATION

8A. Date checked: December 22, 1998

8B. Comments: None (If Yes, summarize)

8C. Has **CONFIDENTIAL** or **PROPRIETARY** information (49 CFR 107.5) been considered in this application? No

PART 9 OVERALL EVALUATION & RECOMMENDATION

Provide standard of equivalency and rationale supporting equivalent level of safety or comment on additional requirements needed to establish equivalency. Include main issues, evidence (i.e. tests), and technical conclusions. See note in Part VI concerning confidential information.

The proposed vessel is built and tested in accordance with the ASME code and is U-stamped. The standard of equivalence for level of safety is DOT-E 11970 and CA-9606007, which authorize transportation of similar material under the same conditions as proposed in this application. The packaging proposed is less than half the size and is stronger than the vessel approved in DOT-E 11970.

The proposed portable tank will be shipped with blind flanged bottom valves. The bottom discharge piping is within footprint of the structural support legs. These features compensate for allowing a bottom discharge outlet with no internal valve.

The material being shipped will be under a dry nitrogen blanket at 10 ~~22~~ psig. These provisions of the proposal provide an equivalent level of safety with the packaging authorized by the HMR.

Approval of this application is recommended.

Office of Hazardous Materials Technology (OHMT)

Office: DHM-22

Project Officer/Date: P. T. Olson December 22, 1998

Reviewer/Date:

Office Director/Date: Charles E. Wechsler 12/23/98